

REMARKS

Reconsideration is respectfully requested of the above-identified application and the Office Action dated September 13, 2000.

First, Applicant has amended Figs. 5 and 6 to add the label --PRIOR ART--, thereby placing the application in still better form for allowance.

Claims 1-5 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner asserts that it is unclear how a predetermined laser intensity can be divided into a plurality of intervals in claims 1 and 2. Applicant directs the Examiner's attention to page 9, line 22 to page 12, line 17, which describes the first potential detecting step and the second potential detecting step recited in claim 1. In addition, Applicant has amended the claims, where appropriate, while giving full consideration to the Examiner's comments. The amendments made to the claims are believed to overcome the §112 rejection.

With regard to independent claim 2, Applicant respectfully submits that claim 2 does not recite a division of a predetermined laser intensity into a plurality of intervals. Accordingly, Applicant respectfully requests that the §112 rejection be withdrawn.

Claims 1-5 are rejected under 35 U.S.C. §103(a) as being purportedly obvious over Applicant's admission of prior art, as illustrated in Figs. 5 and 6, and the accompanying discussion in the specification, in view of Arevalo. The Examiner relies

upon Applicant's admission of prior art as teaching all of the features recited in claims 1-5 except for the first potential detecting step and the second potential detecting step.

However, on page 3 of the Office Action, the Examiner asserts that

Arevalo clearly discloses the claimed algorithm in general in Fig. 4. While Arevalo does not disclose application of the algorithm to laser intensity adjustment, the disclosure is reasonably pertinent to the claimed invention since it solves the same problem of determining the optimal value of a variable for a given constant variable in the same manner as Applicant.

Applicant disagrees with the Examiner's assertions, and submits that claims 1-5 are not obvious for several reasons. First, these claims are not obvious because there is no *prima facie* obviousness. Independent claim 1 recites a first potential detecting step of dividing a "predetermined laser intensity value" into a plurality of first intervals, and further recites a second potential detecting step of dividing the same "predetermined laser intensity value" into a plurality of second intervals. Arevalo does not teach or suggest these steps. As shown in the flow chart in Fig. 4 of the Arevalo patent, the first step in the disclosed method is to determine the full range of input values 402. This range is then divided 404, approximately in half, into sub-ranges, and one test point is selected 406 from near the middle of each half. These two test points are then used as input into a phase shifter, the circuit performance is measured for each test point 408, and the better performing point is determined 410. The half of the range from which the better performing point came 418 is then divided 404 approximately in half, and two

new test points are chosen 406 from near the middle of each new and smaller half. The circuit performance is then measured for each of these new test points 408, and the better performing point is determined 410. This process continues, with each iteration dividing the range of inputs 404 approximately in half, until the optimal point is determined 412, 414. When the optimal point is determined, the input is set accordingly 416. This iterative process disclosed in Arevalo is not the same as the claimed method. To the contrary, as shown in Fig. 4 of Arevalo, the only division step disclosed is the division of a range into a sub-range. That is to say, Arevalo does not teach or suggest dividing a predetermined value into a plurality of first intervals and dividing the same predetermined value into a plurality of second intervals. Accordingly, independent claim 1 should be allowable.

Likewise, claims 2-5 should be allowable because neither Applicant's admitted prior art nor Arevalo teaches or suggests all the features of claims 2-5. For example, independent claim 2 recites a first potential detecting step of exposing photoreceptor surface portions to laser lights of a plurality of laser intensities set at predetermined intervals. In addition, claim 2 recites a second potential detecting step of exposing photoreceptor surface portions to laser lights of a plurality of laser intensities set at second intervals smaller than the first intervals. These steps are neither taught nor suggested in the cited prior art. As conceded by the Examiner, Applicant's admitted prior art does not teach the first potential detecting step or the second potential detecting

step as claimed, and contrary to the Examiner's assertions, these steps are neither taught nor suggested by the Arevalo patent.

Applicant further submits that claims 1-5 are not obvious because contrary to the Examiner's assertions, a person of ordinary skill in the claimed art would not look to Arevalo to solve the problem of the present invention. For example, Arevalo is directed to a method of selecting an optimal value for an input to a device in a phase-shifter circuit, and setting the input to the optimal value. The present invention, on the other hand, is directed to a laser intensity adjusting method of adjusting a maximum intensity of a laser exposure mechanism. Arevalo is nonanalogous art, not only because it is outside the field of technology of the claimed invention, but also because it attempts to solve a problem that is different from the problem solved in the present invention. As described on page 5, lines 11-13, the object of the present invention is to provide a laser intensity adjusting method capable of readily making a residual potential correction in a shorter period of time than that of the prior art. Arevalo, as described in column 1, lines 11-14, attempts to optimize the performance of phase shifters. Clearly, the present invention and the Arevalo patent are diverse arts, and one skilled in the art would not look to Arevalo to solve the problem solved in the present invention.

Furthermore, Applicant submits that claims 1-3 are not obvious because one skilled in the art would not be motivated to combine Arevalo and Applicant's admitted prior art to obtain the invention as claimed. As discussed above, Arevalo is directed to

the optimization of the performance of phase shifters. The present invention, on the other hand, is directed to a laser intensity adjusting method of adjusting a maximum intensity of a laser exposure mechanism. The Arevalo patent and the present invention use different approaches to solving different problems, and accordingly, one skilled in the art would not be motivated to combine Arevalo with Applicant's admitted prior art to obtain the present invention. As such, the Examiner has improperly relied upon hindsight in asserting that the Arevalo patent teaches the steps which are not found in Applicant's admitted prior art.

Nonetheless, even if combined, there are still further reasons why the asserted combination would not result in the invention as claimed. In the present invention, the measurement values of the surface potential of a photoreceptor are not stable, and are likely to drift. That is, even though the laser intensity is fixed, the potential of a surface exposed to the laser light depends on the position of the surface position on the photoreceptor, and also the charging condition of that portion. If the method disclosed in Arevalo is applied to determine an optimal maximum intensity of a laser light for exposure of a photoreceptor surface, there may likely be two or more test points that give acceptable measurement results. In such a case, the method disclosed in Arevalo would not be reliable because it could not determine only one optimal maximum laser intensity.

In the present invention, a plurality of laser intensities are not distributed throughout the full range from zero to a predetermined laser intensity, but are restricted to within a narrower laser intensity range when finding an optimal maximum laser intensity. Therefore, the claimed method still can arrive at only one optimal maximum laser intensity. The range, in which the plurality of laser intensities are set, is defined so that a suitable or optimal maximum laser intensity lies within such a range.

In view of the above amendments and Remarks, Applicant respectfully submits that all of the claims are allowable, and that this application is therefore in condition for allowance. Favorable action is courteously requested at the Examiner's earliest convenience.

Respectfully submitted,

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